REMARKS

The foregoing amendments are responsive to the March 9, 2005 Office Action. Applicant respectfully request reconsideration of the present application in view of the foregoing amendments and the following remarks.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Response to Rejection of Claims 25 and 26 Under 35 U.S.C. 112, Second Paragraph

The Examiner rejected Claims 25 and 26 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner found no antecedent basis for "said third transfer function" and "said fourth transfer function."

Claims 25 and 26 have been amended to correct a typographical error. Both claims now depend from Claim 24, rather than Claim 14. Claim 24 recites a third transfer function and a fourth transfer function. Thus, the Examiner's objection is traversed by the present amendments.

Applicants respectfully request allowance of Claims 25 and 26.

Response to Rejection of Claims 6, 7, 11-13 and 16 Under 35 U.S.C. 103(a)

The Examiner rejected Claims 6, 7, 11-13 and 16 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5, 142,287 to LaBerge et al. ("LaBerge"), in view of in view of U.S. Patent No. 5,802,044 to Baum et al. ("Baum").

LaBerge teaches: "All of the processing from Rader decomposition through carrier tracking filter is performed on the complex values . . . ." (Abstract). The sliding window average 19 in LaBerge operates on the complex values. Likewise, the sliding integrator in Baum, operates on the complex outputs of the RLSTS mixer driven by a complex NCO. Thus, the combination of LaBarge and Baum does not yield the claimed invention wherein the sliding window transform includes a first filter portion implemented using real arithmetic to produce a plurality of first filtered samples, a first complex mixer configured to apply a first time-dependent complex phase rotation to the plurality of first filtered samples to produce a first plurality of

rotated samples, and a second filter portion implemented using complex arithmetic to produce a plurality of output samples from the first plurality of rotated samples.

Moreover, although LaBerge and Baum both deal with communication systems, LaBerge teaches demodulation and decoding in a forward link communication system, while Baum teaches symbol timing synchronization using reverse link timing synchronization. There is no suggestion to combine the forward link system of LaBerge with the reverse link synchronization system of Baum. "The inquiry is not whether each element existed in the prior art, but whether the prior art made obvious the invention as a whole . . . ." (*Beckson Marine, Inc. v. NFM, Inc.*, 292 F.3d 718, 63 USPQ2d 1031 (Fed. Cir. 2002) (citing *In re Durden*, 763 F.2d 1046, 1410, 226 USPQ 359, 367 (Fed. Cir. 1985).)

Regarding Claim 6, the cited combination does not teach or suggest a first filter portion implemented using real arithmetic to produce a plurality of first filtered samples, a first complex mixer configured to apply a first time-dependent complex phase rotation to the plurality of first filtered samples to produce a first plurality of rotated samples, and a second filter portion implemented using complex arithmetic to produce a plurality of output samples from the first plurality of rotated samples.

Regarding Claim 7, the cited combination does not teach or suggest the windowed sliding-window transform of Claim 6, wherein the first filter portion comprises a plurality of *N*-sample time delays.

Regarding Claim 11, the cited combination does not teach or suggest the windowed sliding-window transform of Claim 6, wherein the first time–dependent complex phase rotation is given by $e^{-j\omega_i n}$.

Regarding Claim 12, the cited combination does not teach or suggest the windowed sliding-window transform of Claim 6, wherein the first time-dependent complex phase rotation corresponds to a phase rotation of a bin in a DFT.

Regarding Claim 13, the cited combination does not teach or suggest the windowed sliding-window transform of Claim 6, wherein the first filter portion produces a first filter transfer function according to a plurality of filter weights.

Regarding Claim 16, the cited combination does not teach or suggest a means for filtering a plurality of real data samples according to a first filter transfer function to produce a plurality of

first filtered samples, means for applying a time-dependent complex phase rotation to the plurality of first filtered samples to produce a plurality of rotated samples, and means for filtering the plurality of rotated samples according to a second filter transfer function to produce a plurality of output samples.

Accordingly, Applicants assert that Claims 6, 7, 11-13 and 16 are patentable over the prior art, and Applicants request allowance of Claims 6, 7, 11-13 and 16.

Objections to Claims 8-10 and 14-15

The Examiner objected to Claims 8-10 and 14-15 as being dependent upon a rejected base claim. The Examiner indicated that Claims 8-10 and 14-15 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding Claim 8, the cited combination does not teach or suggest the windowed sliding-window transform of Claim 6, wherein the second filter portion comprises a plurality of single-sample time delays.

Regarding Claim 9, the cited combination does not teach or suggest the windowed sliding-window transform of Claim 6, wherein the second filter portion comprises a plurality of infinite impulse response filters.

Regarding Claim 10, the cited combination does not teach or suggest the windowed sliding-window transform of Claim 6, wherein the second filter portion comprises a plurality of single-pole filters applied in series.

Regarding Claim 14 the cited combination does not teach or suggest the windowed sliding-window transform of Claim 6, further comprising: a second complex mixer configured to apply a second time-dependent complex phase rotation to the plurality of first filtered samples to produce a second plurality of rotated samples; and a third filter portion implemented using complex arithmetic to produce a second plurality of output samples from the second plurality of rotated samples.

Regarding Claim 15 the cited combination does not teach or suggest the windowed sliding-window transform of Claim 14, wherein the first time-dependent complex phase rotation corresponds to a phase rotation of a first bin in a DFT and the second time-dependent complex phase rotation corresponds to a phase rotation of a second bin in the DFT.

Accordingly, Applicants assert that Claims 8-10 and 14-15 are patentable over the prior art, and Applicants request allowance of Claims 8-10 and 14-15.

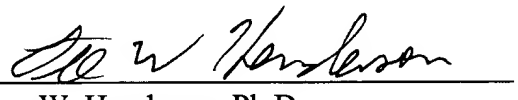
Summary

Applicant respectfully assert that Claims 1-26 are in condition for allowance, and Applicant request allowance of Claims 1-26. If there are any remaining issues that can be resolved by a telephone conference, the Examiner is invited to call the undersigned attorney at (949) 721-6305 or at the number listed below.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: July 22, 2005

By: 

Lee W. Henderson Ph.D.
Registration No. 41,830
Attorney of Record
Customer No. 20,995
(949) 760-0404

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